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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,741	05/16/2001	Samuel D. Conzone	BKRAM-1 P1	9034

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EXAMINER

ASSAF, FAYEZ G

ART UNIT PAPER NUMBER

2872

DATE MAILED: 06/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/855,741

Applicant(s)

CONZONE ET AL.

Examiner

Fayez G. Assaf

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Claim Objections***

Claims 1-50 are objected to because of the following informalities:

Claim 1, line 1, the term photonic is misspelled.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-14 and 51-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Meissner (US 5,846,638).

Regarding claims 1-3, 5 and 51-53, Meissner discloses a photonic device comprising, a first section (317 bottom in Fig. 3c) including an optical material, a second section (317 top in Fig. 3c) including an optical material, with an area of the first section and an area of the second section abutting each other (see Fig. 3), wherein at least a part of the first area

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and a part of the second area define a low temperature bonding area (line 49 to line 67 of Col. 12), mechanically or optically connected, and wherein the first section and the second section form a waveguide (line 54 to line 64 of Col. 15).

Regarding claim 4, Meissner discloses the device comprising one ore more interaction types of the group of interactions consisting of transmission of photons, reflection of photons, absorption of photons, generation of photons, emission of photons, wavelength conversion of photons, guiding of photons, diffraction of photons, refraction of photons, superimposing photons, generation of photon interference and linear, elliptic and circular polarization of photons (line 66 of Col. 15).

Regarding claim 6, 51 and 53, Meissner discloses the device comprising block of glass with a waveguide and the second section comprising an optical fiber (line 35 to line 44, Fig. 3).

Regarding claims 7-14 and 52, Meissner discloses the first material having at least a portion where an index of refraction being different from an index of refraction of at least a portion of said second material, wherein the photonic device is a wave guide defined in a surface area of the first material and the waveguide being covered by said second material, and wherein an essentially two-dimensional optical chip is defined with

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waveguides connecting active and passive optical components  
(line 65 of Col. 15 to line 44 of Col. 16).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 15-50 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meissner in view of Official Notice.

Meissner discloses the claimed invention including an explicit teaching that many combinations of waveguide structures are conceivable for specific electro-optical devices (line 38 to line 42 of Col. 14). It is this teaching, in essence, enables and artisan of practicing devices such as splitters, interferometers, modulators, or any combination thereof. The optical devices, which are recited in the instant application, claims 15-50, are conventional and well known.

It would have been obvious, at the time the invention was made to realize such optical devices by utilizing the teachings

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of Meissner so as obtain effect free bonds between different optical elements in an optical device (see Abstract, claims 1 and 4).

Claims 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meissner.

Meissner discloses the claimed invention except for the temperature bonding area comprising a cured phosphorous-containing solution, condensed phosphate layer such as P-O-P layer.

However, such materials are well known for bonding optical elements. Furthermore, selecting preferred materials does not serve as a basis for patentability.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made to utilize such materials, because they their properties are well understood. Further, it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416.

#### ***Response to Arguments***

Applicant's arguments filed 04/02/2003 have been fully considered but they are not persuasive.

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The Applicant argues that Meissner does not disclose "low temperature" bonding area, because low temperature techniques have an understood meaning in the art, even though the bonding process of Meissner can be achieved at temperatures as low as claimed by the Applicant.

The Examiner respectfully disagrees, because the language of the claims only requires low temperature bonding **area** as being disclosed by Meissner, not a specific low bonding technique. Furthermore, low temperature bonding, in general, refers to a *variety* of techniques operating at low temperatures. It is contradictory to use the term "high temperature" bonding to describe the process of Meissner, which is done at actual low temperatures, as understood in the art. One skilled in the art cannot possibly understand *only* the one process intended by the Applicant based on reading the language of the claims.

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

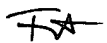
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action

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is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

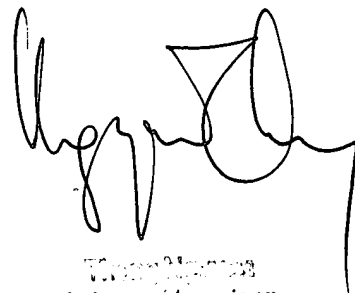
Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayez Assaf whose telephone number is (703) 306-5526. The fax number for the organization where this application or proceeding is assigned is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Fayez Assaf

6/14/03

  
Fayez Assaf  
Examiner